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(74) Agent: GIBSON, Stewart, Harry; Urquhart-Dykes & Lord, Three Trinity Court, 21-27 Newport Road, Cardiff CF24 0AA (GB).

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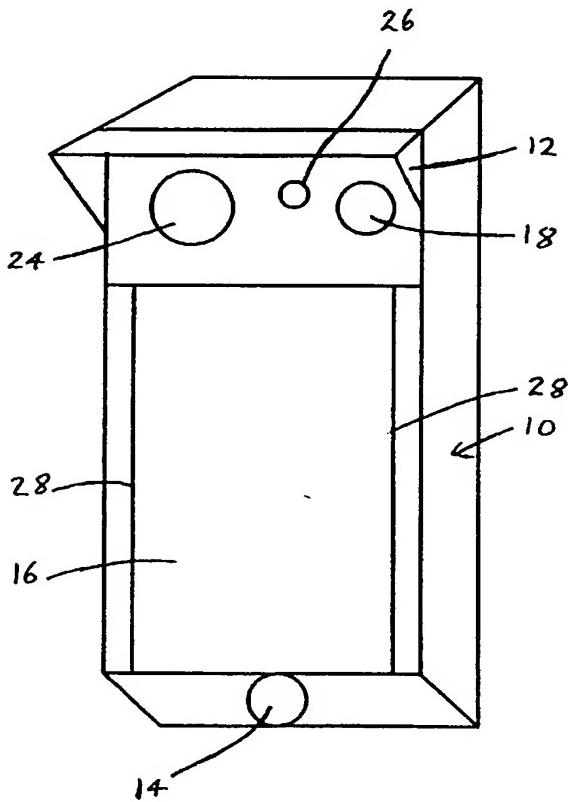
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(54) Title: WARNING UNIT

(57) Abstract: A warning unit comprises a housing (10) for mounting to a wall, the housing (10) containing a control unit and the warning unit having a proximity sensor (14) for detecting the approach of any person to cause the control unit to energise a sound emitting device (24), which preferably replays a verbal warning message.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Warning Unit

The present invention relates to a warning unit arranged to give a warning to anyone approaching or entering an area to be protected.

There are various situations where, particularly for 5 safety reasons for example, it is desirable to give a warning to any person approaching or entering a particular area.

We have now devised a warning unit which provides an effective warning to anyone approaching the area which it protects.

10 In accordance with the present invention, there is provided a warning unit mounted to a wall, or arranged to be mounted to a wall, the warning unit comprising a housing mounted to or for mounting to the wall, the housing containing a control unit and the warning unit having a proximity sensor 15 for detecting the approach of any person to cause the control unit to energise a sound emitting device.

Preferably the control unit is arranged to replay a verbal message via the sound emitting device. Preferably the control unit stores a number of verbal messages and a selector 20 is provided for determining which of these messages is used. Preferably the warning unit includes means enabling new messages to be recorded.

The warning unit may include a flashing light which is energised in response to the proximity sensor detecting the 25 approach of any person.

Preferably the housing of the warning unit comprises a front cover which is locked in its closed position but can be unlocked and opened to gain access to a control panel of the unit. The verbal message to be replayed is selected via this 30 control panel: also, the length of a "sleeping period" is selected via the control panel, i.e. the period following a replay of the message, before the proximity sensor is allowed to cause the next replay of the message.

Preferably screw-holes for mounting the housing to the 35 wall are accessible only once the front cover of the housing is opened.

Preferably the warning unit is powered by a battery contained within its housing. This battery is either replaceable, or is rechargeable from mains.

Preferably the front cover is provided with a pair of 5 slots into which the opposite edges of a warning or safety sign may be inserted, the arrangement being such that, when the front cover is closed, the sign is held in position.

An embodiment of the present invention will now be devised by way of example only and with reference to the 10 accompanying drawings, in which:

Figure 1 is front view of a wall-mounted warning unit in accordance with the invention; and

Figure 2 is a similar view of the warning unit, shown with its front cover open.

15 Referring to the drawings, there is shown a wall-mounted warning unit which comprises a generally flat, rectangular housing 10 which is arranged to be mounted to a wall in an upright position. At its upper end, the housing 10 has a forwardly-projecting hood 12 to provide protection for 20 the unit against rain. A proximity sensor 14 is mounted to the bottom end of the housing 10.

The housing 10 is provided with a front cover 16 which is hinged to the housing 10 along its bottom edge. A lock 18 serves to lock the front cover in its closed position. Within 25 the housing 10, and behind the front cover 16, are mounted a control panel 20, a rechargeable battery 22, and an electronic control unit (not shown).

In use of the warning unit, should a person approach the area protected by the unit, the proximity sensor 14 30 activates the control unit to play a recorded audible message, which is relayed by a loudspeaker mounted behind a waterproof grille 24 in the front of the housing: a flashing light 26 is energised at the same time.

The control unit is arranged to store up to eight 35 messages and the user can select, via the control panel, which message is to be replayed.

After each message-replay, there may be a delay

(selectable, via the control panel), between zero seconds and one hour, for example) before the message will be replayed again (in response to a subsequent activation by the proximity sensor). In other words, the full cycle of operation is:
5 detect, message playback, message delay, detect.... and so on.

The back of the housing 10 is provided with screw-holes (accessible only when the front cover 16 is open) for mounting it to the wall. The unit is also provided with a movement sensor (not shown) arranged to provide an audible alarm in the
10 event that the unit is moved by an unauthorised person: the audible alarm is preferably relayed through the same loudspeaker as the audible message.

The front cover 16 of the housing is formed with a pair of slots 28 into which the opposite edges of a 200mm x 150mm
15 safety sign may be inserted: the arrangement is such that when the front cover is closed and locked, the sign is retained in position and difficult to remove.

It will be appreciated that the warning unit which has been described may be mounted to a wall at a convenient height
20 and will provide an effective warning to any approaching person, yet the warning unit will not obstruct the passage of authorised persons or vehicles.

One or more tapes or other elongate flexible elements may be provided, for linking between the warning unit and other
25 structure, to form a barrier. For example, the warning unit may be mounted to the wall on one side of a lift and the tape or flexible element extended across the lift doors if the lift is out of order, the warning unit providing an audible warning message and the tape etc. providing a barrier. In particular,
30 the warning unit may include one or more retractable tape units from which the tapes may be extended when required.

CLAIMS

- 1) A warning unit mounted to a wall, or arranged to be mounted to a wall, the warning unit comprising a housing mounted to or for mounting to the wall, the housing containing 5 a control unit and the warning unit having a proximity sensor for detecting the approach of any person to cause the control unit to energise a sound emitting device.
- 2) A warning unit as claimed in claim 1, in which said control unit is arranged to replay a verbal message via said 10 sound emitting device.
- 3) A warning unit as claimed in claim 2, in which said control unit is arranged to store a plurality of verbal messages an a selector is provided for determining which of the stored messages is replayed.
- 15 4) A warning unit as claimed in claim 2 or 3, including means enabling new messages to be recorded.
- 5) A warning unit as claimed in any preceding claim, further including a flashing light which is energised in response to said proximity sensor detecting the approach of any 20 person.
- 6) A warning unit as claimed in any preceding claim, in which said housing comprises a front cover which is locked in its closed position but which can be unlocked and opened to gain access to a control panel of said control unit.
- 25 7) A warning unit as claimed in claim 6, in which screw-holes for mounting said housing to its wall are accessible only once said front cover of said housing is opened.

8) A warning unit as claimed in claim 6 or 7, in which said front cover is provided with a pair of slots into which the opposite edges of a warning or safety sign may be inserted, and arranged to be held in position when the front cover is
5 closed.

9) A warning unit as claimed in any one of claims 6 to 8 appended to claim 3, arranged for the selection of the verbal message to be replayed to be selected via said control panel.

10) A warning unit as claimed in any one of claims 6 to 8
10 appended to any one of claims 2 to 4, arranged for use of the control panel to determine the period, following replay of the or a said message, before said proximity sensor is allowed to cause the next replay of that message.

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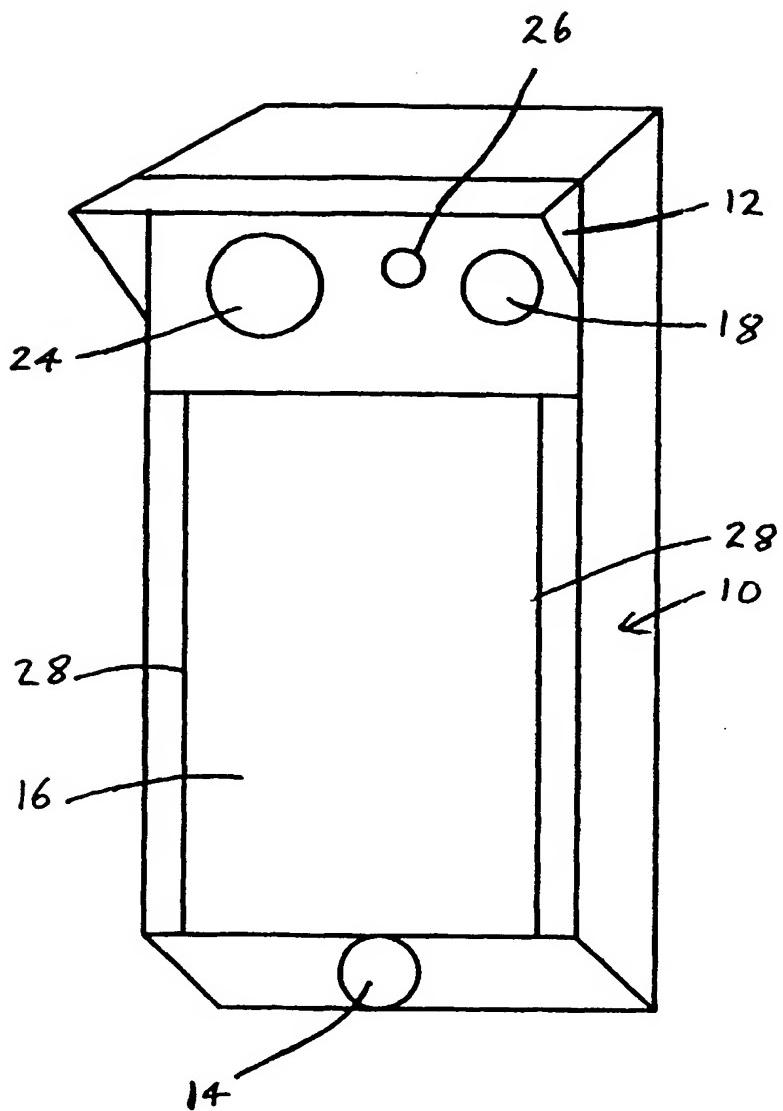


Figure 1

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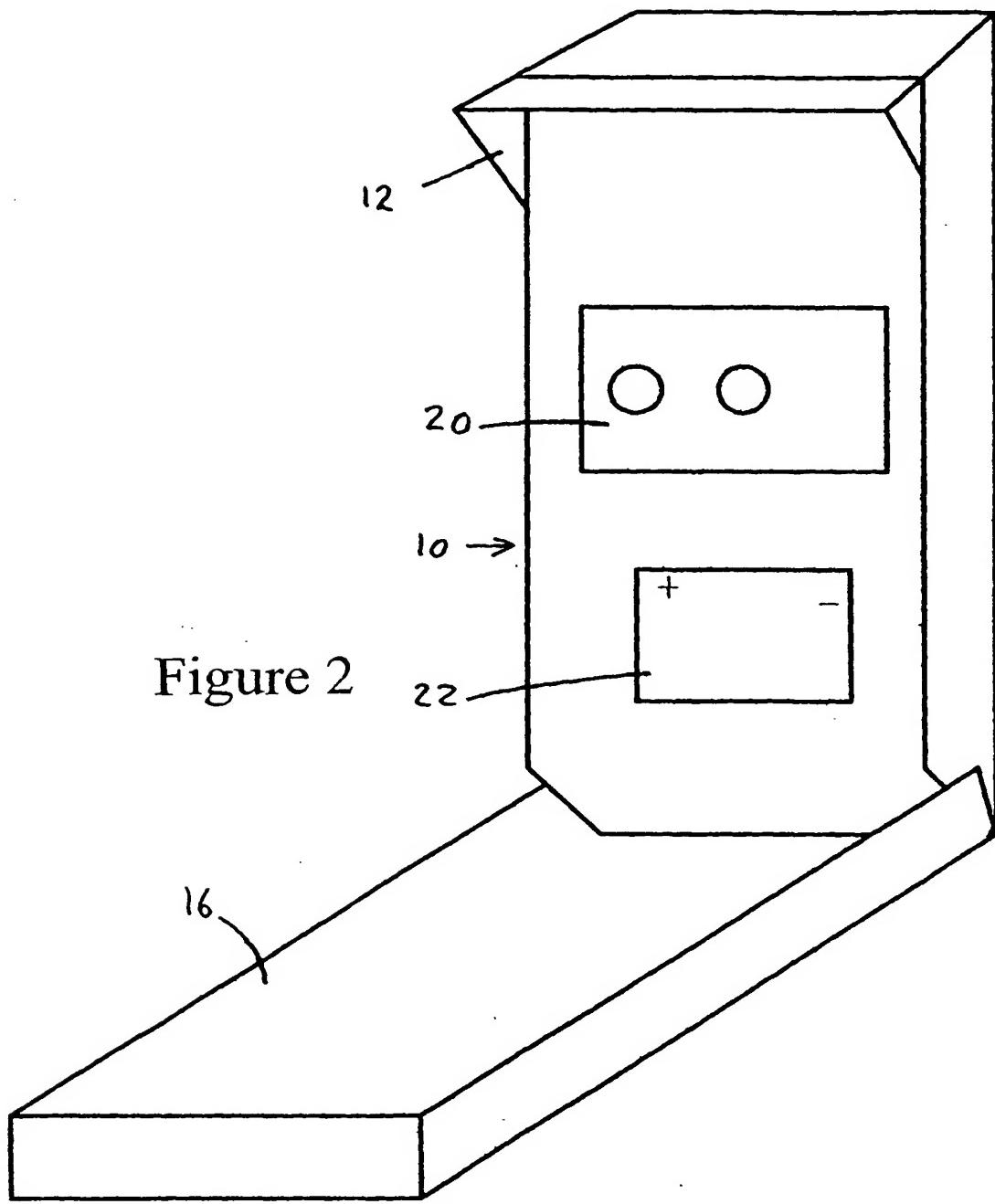


Figure 2

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G08B3/10 G08B7/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G08B G09F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NL 1 003 835 C (V O F HOLLAND GELUID & TECHNIE) 26 February 1998 (1998-02-26) page 4, line 5 - line 15 page 5, line 1 - line 5 page 6, line 3 - line 15 page 7, line 10 - line 11 ---	1,2,6-10
X	GB 2 215 104 A (VOICEBOX LIMITED) 13 September 1989 (1989-09-13) page 7, line 4 - line 8 ---	1,2,4,9, 10
X	GB 2 317 984 A (SANDERS MARK JOHN) 8 April 1998 (1998-04-08) page 5, line 32 - line 39 page 6, line 4 - line 10 page 6, line 29 - line 35 figure 3 ---	1,2,5-8
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

De la Cruz Valera, D

INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 532 680 A (OUSBORNE JEFFREY) 2 July 1996 (1996-07-02) column 3, line 15 – line 39 figure 1 ---	1-4
X	US 5 781 108 A (STEWART JEFFREY S ET AL) 14 July 1998 (1998-07-14) the whole document -----	1-5

INTERNATIONAL SEARCH REPORTInternational Application No
PCT/GB 03/04979

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
NL 1003835	C	26-02-1998	NL	1003835 C1		26-02-1998
GB 2215104	A	13-09-1989	NONE			
GB 2317984	A	08-04-1998	NONE			
US 5532680	A	02-07-1996	NONE			
US 5781108	A	14-07-1998	NONE			

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